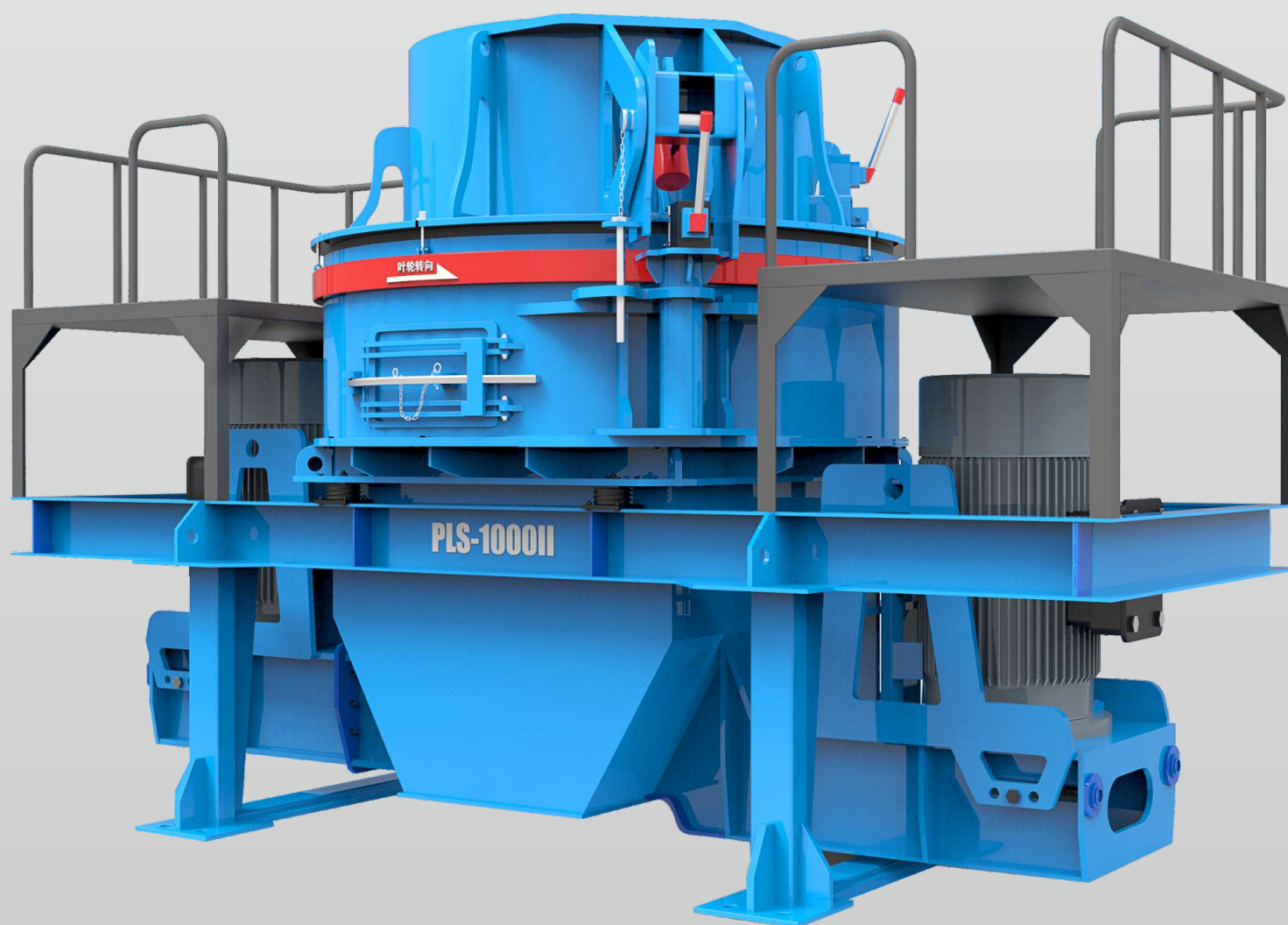


# PLS SERIES

## Vertical Shaft Impact Crusher



## DESCRIPTION



Beyond the traditional crushing theory, PLS Vertical Shaft Impact Crusher was designed by our company firstly in China as a new-type of crusher, which has filled the gap of the national crushing industry at that time. Since the first one was introduced into the market, it brought about a big revolution to the crushing industry for rock and mining material. It has the features of low cost, good adaptability and throughout, wide application etc. Until now the company sold thousands of the machines in China as well as overseas in many industries with good reputation.

## WORKING PRINCIPLE

Based on the working conditions or crushing different materials to control the feeding, there are two types of crushing principles for PLS Vertical Shaft Impact Crusher, “Stone-Beat-Stone” and “Stone-Beat-Iron”. “Stone-Beat-Stone” uses waterfall material separating system. One part of the material falling from the central feed tube to the impeller chamber with high speed. And the other part of the material falling from overflow holes around the feeding hopper to the machine chamber. The material falling to chamber is shot out from the discharge outlet of the impeller by the action of the centrifugal force. Then they are smashed with another part of the materials that have been distributed around impeller by the distributor.

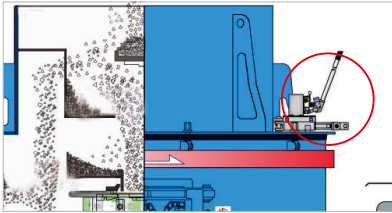
“Stone-Beat-Iron”: All the material falling from the feed tube to the impeller chamber with high speed. And it is shot out from the discharge outlets of impeller by the action of the high-speed centrifugal force, then crush with impact plate around the impeller.

## WIDE RANGE OF APPLICATION

PLS Series Vertical Shaft Impact Crusher can be widely used in many industries, such as metal and nonmetallic ore, refractory material, raw material for glass ceramics, construction material and highway, hydraulic engineering and hydraulic power project, aggregate production. It is superior to other types of crushers especially for the materials with medium and high degree of hardness as well as hard abrasive materials such as silicon carbide, bauxite, magnesia and so on.

The machine can use the high speed of impeller at 80m/s. It can be used in making the final products with better shape to optimize grain size distribution and make the fineness modulus smaller.

## STRUCTURE FEATURES



### Feeding control device

It is optional to use the manual hydraulic pump, which adjust the feeding to the impeller. Working together with the position adjustment of distributor, the machine can control the ratio between feeding material from impeller and surrounding falling material.



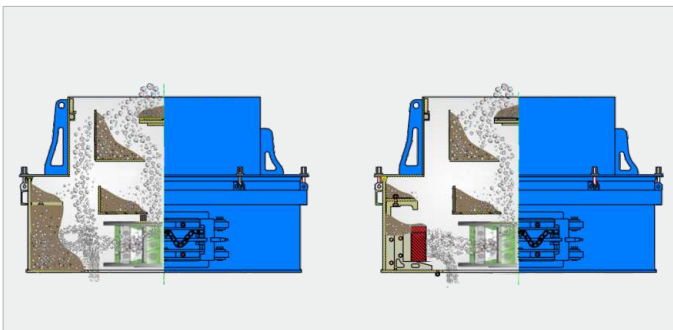
### Lifting device

It is optional to use the manual hoist or electric hoist to remove the feed hopper, distributor, impeller and shaft easily, which is convenient to maintain the machine.



### Hydraulic lifting device

It is optional to use the hydraulic lifting device to lift the feed hopper and move it to the other side which is convenient for maintenance.

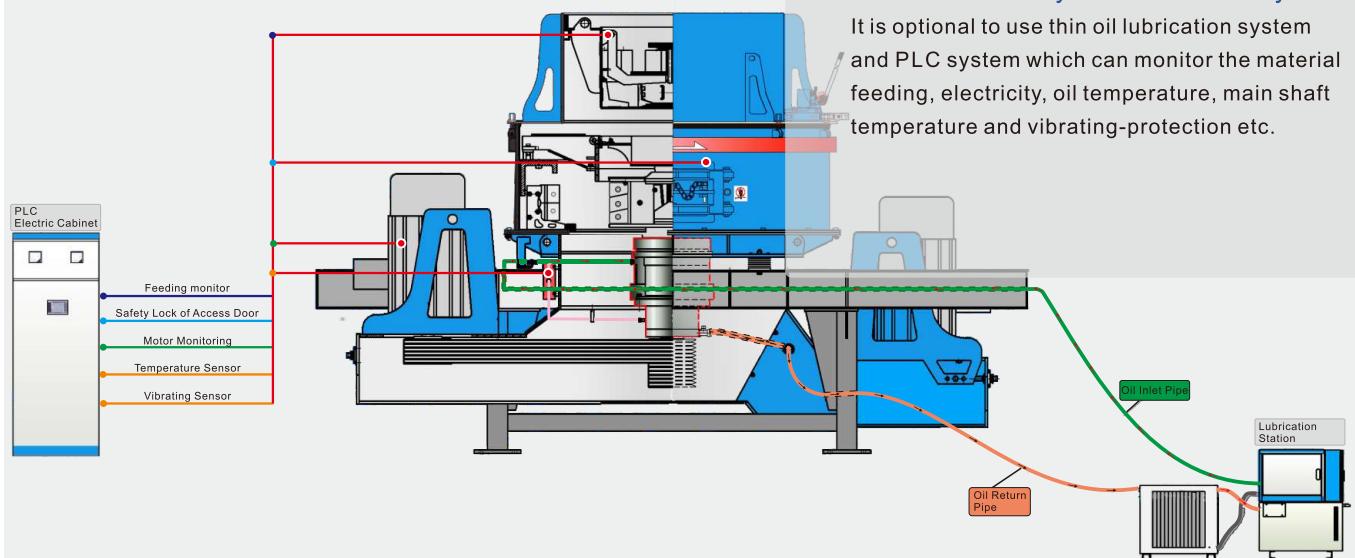


### Multifunctional crushing cavity

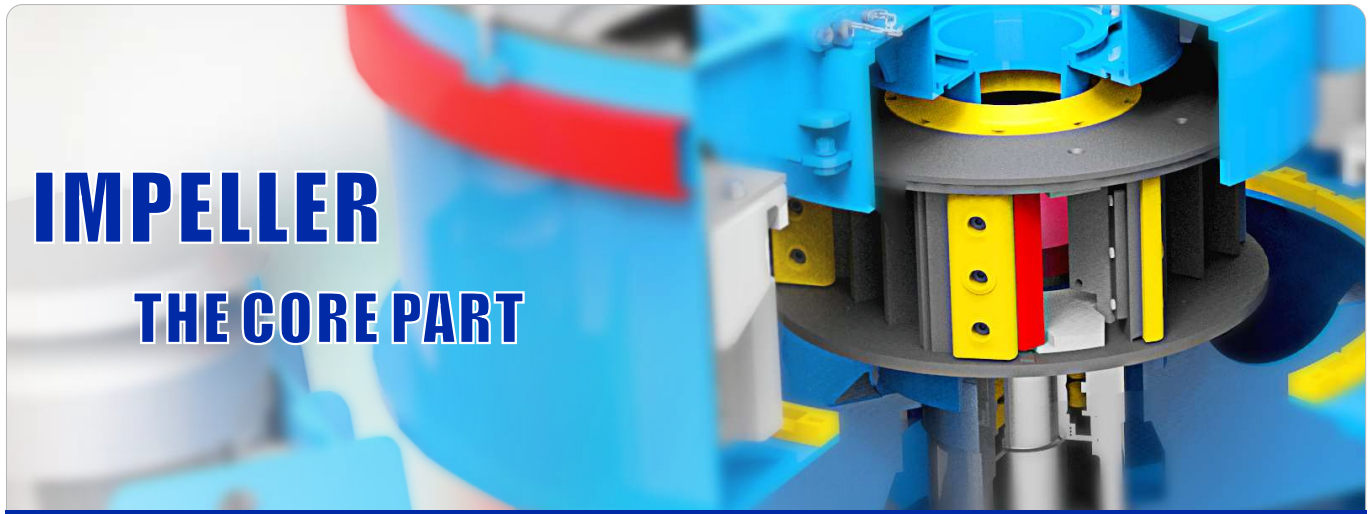
There are two types of crushing modes of this equipment with the same crushing cavity: "Stone-Beat-Stone" and "Stone-Beat-Iron". By changing several parts, the crushing modes can be switched to each other. It can adapt to many working conditions and different requirements of crushing and shaping.

### Thin oil lubrication system and PLC system

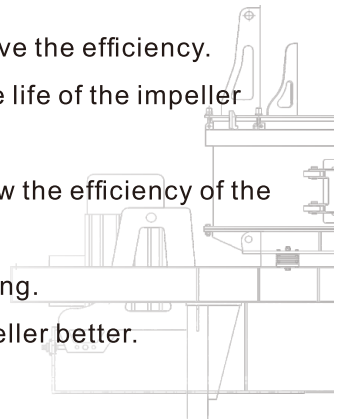
It is optional to use thin oil lubrication system and PLC system which can monitor the material feeding, electricity, oil temperature, main shaft temperature and vibrating-protection etc.



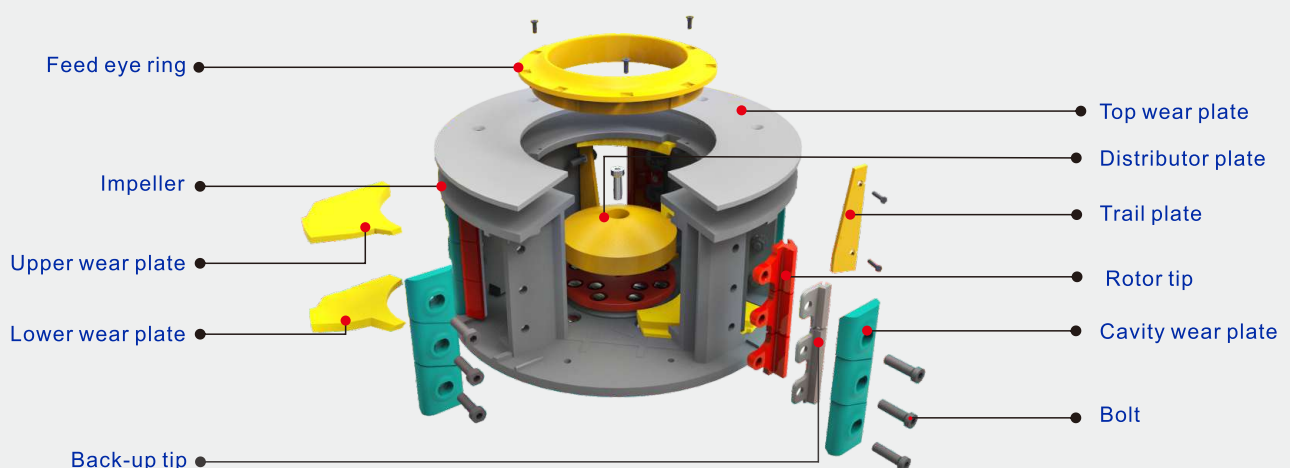
## “HEART” OF VERTICAL SHAFT IMPACT CRUSHER - IMPELLER



- The design of deep cavity makes more space for the impeller which can improve the efficiency.
- Reasonable inner structure makes the material protect itself, which makes the life of the impeller longer. And the cost will be lower.
- There are different speeds (high, medium, low) to choose which can fully show the efficiency of the machine. It has the function of crushing, sand making and shape making.
- The wear plate and hardfacing protect the impeller and make it safe and life long.
- Higher accuracy of manufacture makes the anti-unbalanced ability of the impeller better.
- The wear parts are standard modularity. It is convenient for maintenance.



### IMPELLER STRUCTURE



## TECHNICAL SPECIFICATIONS

No.	Model	Max. Feed Size (mm)	Impeller Speed (rpm)	Power (kw)	Capacity ( t/h )	Weight ( kg )
1	PLS-550	30	2258-2600	30-45	24-60	4780
2	PLS-700	35	1775-1965	55-110	55-120	7250
3	PLS-850 II	50	1320-1720	150-320	75-345	11500
4	PLS-1000 II	60	1240-1460	320-500	200-585	17000
5	PLS-1200 II	60	1040-1300	500-630	300-715	21600

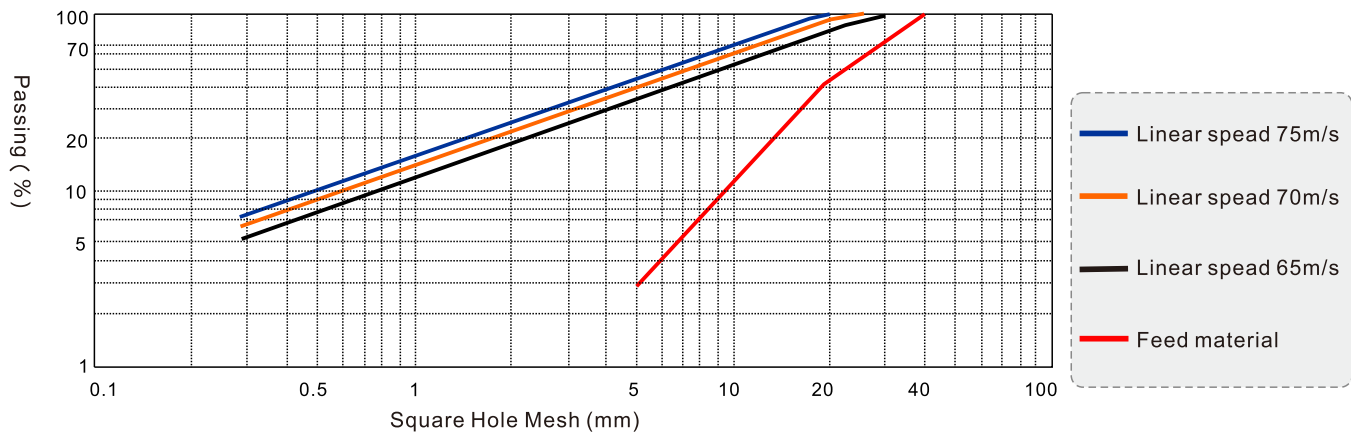
All the details are subject to change without notice. For more information about the precise application and installation details, please contact equipment supplier.

**Remarks:** 1. The above capacity is based on the rock with bulk density 1.6t/m<sup>3</sup>

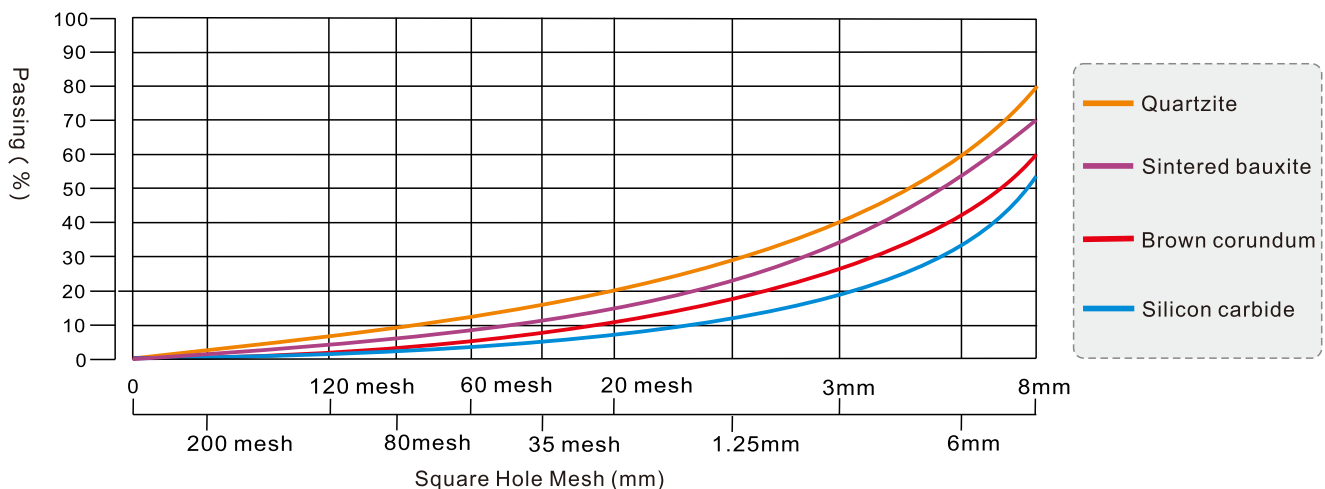
2. The above capacity will be affected by feed size, material grading, water content and rock type.

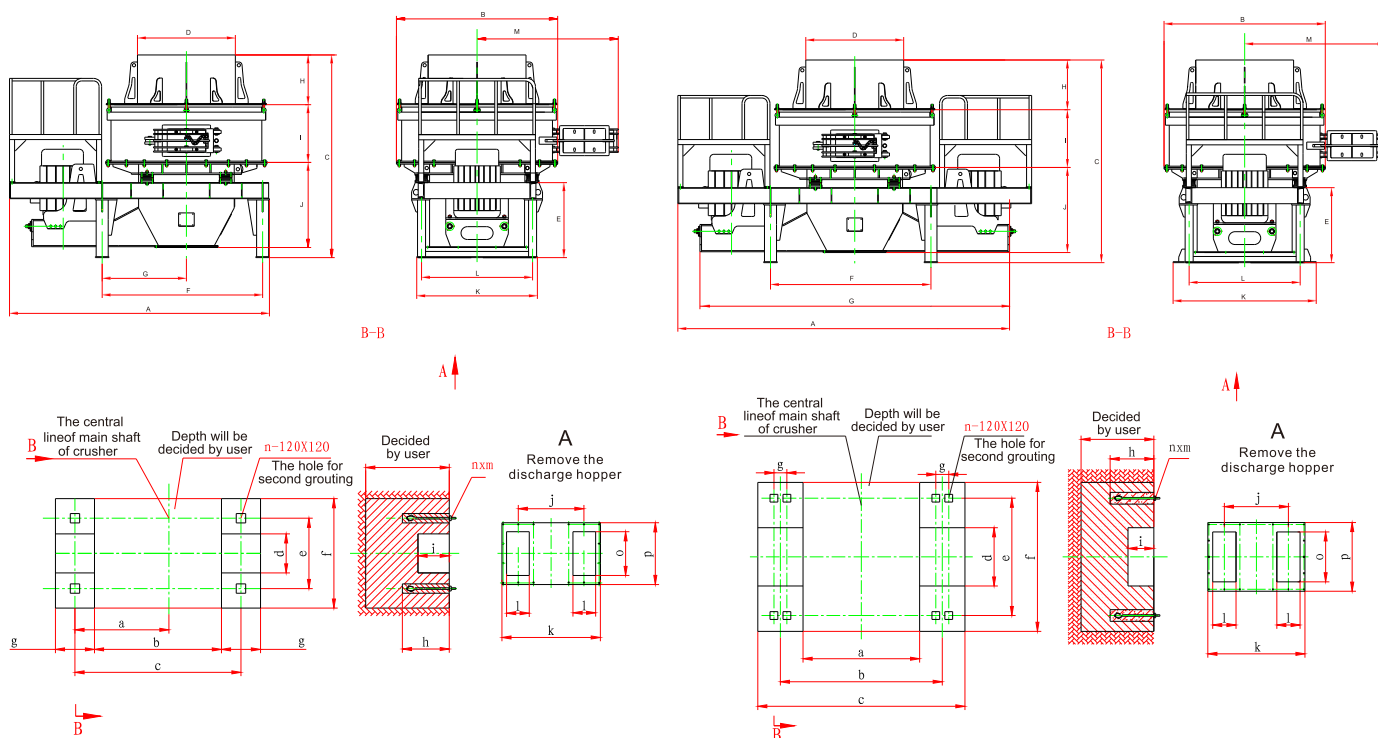
## GRADATION CURVES

**Table1:** for manufactured sand



**Table2:** for processing nonmetallic ore (Feed size-35mm)





PLS-550, PLS-700 Single Motor

PLS-850II, PLS-71000II , PLS-1200II Double Motors

Table1

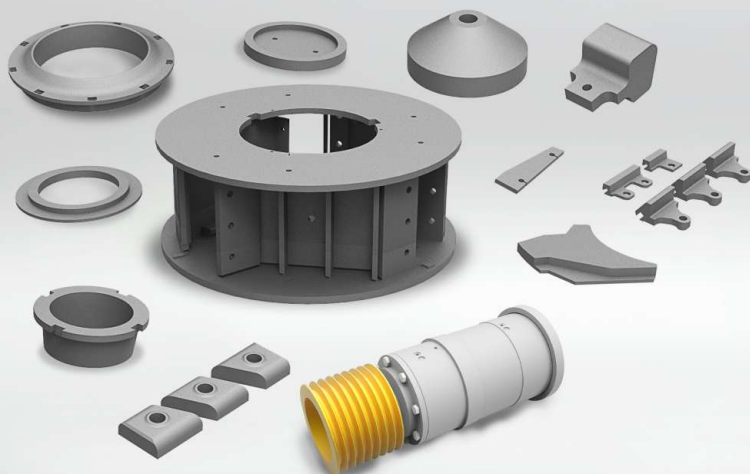
Dimension Model	A	B	C	D	E	F	G	H	I	J	K	L	M
PLS-550	2510	1690	2130	1000	760	1780	1080	530	615	860	1300	1180	1635
PLS-700	3240	2010	2530	1320	935	2000	1050	620	720	1049	1504	1384	1780
PLS-850 II	4700	2400	2225	1510	1096	2500	4712	700	740	1127	1930	1582	2030
PLS-1000 II	5300	2510	3450	1700	1350	2600	4700	900	860	1270	2250	1880	2150
PLS-1200 II	6200	2830	3820	1800	1755	2900	5080	900	864	1836	2420	2030	2270

Table2

Dimension Model	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
PLS-550	1080	1280	1780	500	850	1690	500	600	350	682	1060	260	M20X500	4	580	770
PLS-700	1050	1500	2000	500	900	1400	500	600	400	850	1260	280	M30X500	4	560	790
PLS-850 II	1800	2500	3200	900	1810	2300	200	600	400	990	1500	360	M30X500	8	770	1060
PLS-1000 II	1760	2600	3500	1300	2150	2600	250	600	500	1114	1760	455	M30X500	8	700	1060
PLS-1200 II	2000	2900	3800	1450	2320	2770	250	600	500	1144	1820	485	M30X500	8	600	1060

## APPLICATIONS





## VALUE BUILT UPON SERVICES

In order to ensure that your equipment is under the best condition, it is highly recommended to use parts, components and recommended lubrication oil from Luoyang Dahua.



## LUOYANG DAHUA

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